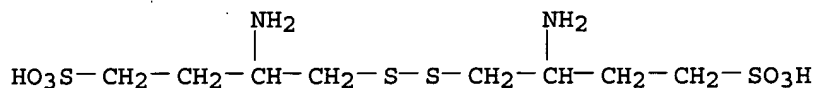


=> s 213488-11-0/rn  
L1 1 213488-11-0/RN

=> d

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2007 ACS on STN  
RN 213488-11-0 REGISTRY  
ED Entered STN: 29 Oct 1998  
CN 1-Butanesulfonic acid, 4,4'-dithiobis[3-amino-, disodium salt (9CI) (CA  
INDEX NAME)  
MF C8 H20 N2 O6 S4 . 2 Na  
SR CA  
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL  
CRN (721392-96-7)



●2 Na

3 REFERENCES IN FILE CA (1907 TO DATE)  
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> file hcaplus  
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
2.40	2.61

FULL ESTIMATED COST

FILE 'HCAPLUS' ENTERED AT 12:20:39 ON 21 FEB 2007  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 21 Feb 2007 VOL 146 ISS 9  
FILE LAST UPDATED: 19 Feb 2007 (20070219/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l1  
L2 3 L1

=> d 1-3 ibib abs hitstr

L2 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:119917 HCAPLUS  
DOCUMENT NUMBER: 142:218961  
TITLE: Antihypertensive derivatives of 4,4'-dithiobis(3-aminobutane-1-sulfonate)  
INVENTOR(S): Roques, Bernard P.; Inguimbert, Nicolas; Fournie Zaluski, Marie Claude; Corvol, Marie Therese M.; Llorens Cortes, Catherine  
PATENT ASSIGNEE(S): Institut National de la Sante et de la Recherche Medicale INSERM, Fr.  
SOURCE: Fr. Demande, 23 pp.  
CODEN: FRXXBL  
DOCUMENT TYPE: Patent  
LANGUAGE: French  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2858617	A1	20050211	FR 2003-9700	20030806
CA 2533432	A1	20050217	CA 2004-2533432	20040806
WO 2005014535	A1	20050217	WO 2004-FR2106	20040806
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
EP 1651596	A1	20060503	EP 2004-786279	20040806
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK			
JP 2007501204	T	20070125	JP 2006-522380	20040806
US 2006205695	A1	20060914	US 2006-567362	20060206
PRIORITY APPLN. INFO.:			FR 2003-9700	A 20030806
			WO 2004-FR2106	W 20040806

OTHER SOURCE(S): MARPAT 142:218961

AB Antihypertensive derivs. of 4',4'-dithiobis(3-aminobutane-1-sulfonate) H<sub>2</sub>NC(R<sub>1</sub>)(R<sub>3</sub>)CH(R<sub>2</sub>)SSCH(R<sub>2</sub>)C(R<sub>1</sub>)(R<sub>3</sub>)NH<sub>2</sub> [R<sub>1</sub> = sulfonate- or phosphonate- or carboxylate-substituted alkyl, substituted alkenyl, substituted alkynyl, substituted Ph, substituted benzyl, substituted cycloalkyl, substituted cycloalkylmethyl; R<sub>2</sub> = H, substituted alkyl, substituted alkenyl, substituted alkynyl; R<sub>3</sub> = H, alkyl; etc.; e.g., 4,4'-dithiobis[(2,2-dimethylpropyl)-3-aminobutane-1-sulfonate]] are described and their use in pharmaceutical formulations for the treatment of hypertension is claimed.

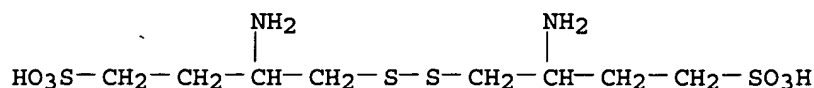
IT 213488-11-0P

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(antihypertensive derivs. of 4,4'-dithiobis(3-aminobutane-1-sulfonate))

RN 213488-11-0 HCAPLUS

CN 1-Butanesulfonic acid, 4,4'-dithiobis[3-amino-, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:60460 HCAPLUS

DOCUMENT NUMBER: 140:128054

TITLE: Preparation of 4,4'-dithiobis-(3-aminobutane-1-sulfonates) and compositions containing them for treating hypertension

INVENTOR(S): Fournie-Zaluski, Marie-Claude; Llorens-Cortes, Catherine; Roques, Bernard P.

PATENT ASSIGNEE(S): Institut National de la Sante et de la Recherche Medicale (Inserm), Fr.

SOURCE: PCT Int. Appl., 25 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

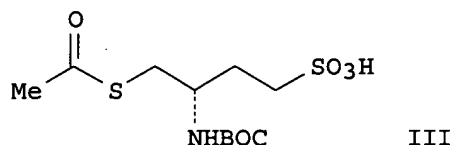
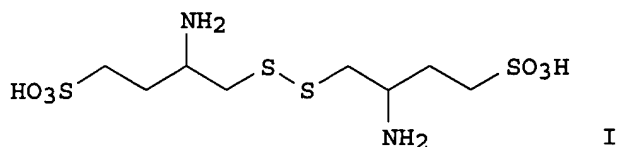
LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004007441	A2	20040122	WO 2003-FR2242	20030716
WO 2004007441	A3	20040408		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
FR 2842522	A1	20040123	FR 2002-8977	20020716
FR 2842522	B1	20041015		
FR 2852597	A1	20040924	FR 2003-3425	20030320
AU 2003271811	A1	20040202	AU 2003-271811	20030716
EP 1525188	A2	20050427	EP 2003-753648	20030716
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK			
US 2006135602	A1	20060622	US 2005-521171	20050921
PRIORITY APPLN. INFO.:			FR 2002-8977	A 20020716
			FR 2003-3425	A 20030320
			WO 2003-FR2242	W 20030716

GI

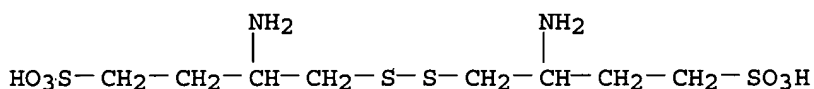


AB The invention is directed to the preparation of 4,4'-dithiobis-(3-aminobutane-1-sulfonates) as well as their pharmaceutical acceptable salts as antihypertensive agents. For example, the (S, S) stereoisomer of I•2Na•2HCl (II) was prepared in 6 steps from L-homoserine via dimerization of III•Na in the presence of EtOH/H<sub>2</sub>O/I<sub>2</sub>. II showed a blood pressure reduction of 3680 Pa in 4.5 h after oral administration to rats. Thus, I, their related compds. and formulations are useful for treatment of hypertension and indirectly- or directly-linked illnesses.

IT 213488-11-0P  
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (antihypertensive agent; preparation of 4,4'-dithiobis-(3-aminobutane-1-sulfonates) as antihypertensive agents)

RN 213488-11-0 HCAPLUS

CN 1-Butanesulfonic acid, 4,4'-dithiobis[3-amino-, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

L2 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:505738 HCAPLUS

DOCUMENT NUMBER: 129:254345

TITLE:  $\beta$ -Amino-thiols Inhibit the Zinc Metalloproteinase Activity of Tetanus Toxin Light Chain

AUTHOR(S): Martin, Loiee; Cornille, Fabrice; Coric, Pascale; Roques, Bernard P.; Fournie-Zaluski, Marie-Claude

CORPORATE SOURCE: Departement de Pharmacochimie Moleculaire et Structurale, UFR des Sciences Pharmaceutiques et Biologiques, Paris, 75270, Fr.

SOURCE: Journal of Medicinal Chemistry (1998), 41(18), 3450-3460

PUBLISHER: CODEN: JMCMAR; ISSN: 0022-2623  
 American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 129:254345

AB Tetanus neurotoxin is a 150-kDa protein produced by *Clostridium tetani*, which causes the lethal spastic paralytic syndromes of tetanus by blocking inhibitory neurotransmitter release at central synapses. The toxin light chain (50 kDa) has a zinc endopeptidase activity specific for synaptobrevin, an essential component of the neuroexocytosis apparatus. Previous unsuccessful attempts to block the proteolytic activity of this neurotoxin with well-known inhibitors of other zinc proteases led the authors to study the design of specific inhibitors as a possible drug therapy to prevent the progressive evolution of tetanus following infection. Starting from the synaptobrevin sequence at the level of the cleavage site by tetanus neurotoxin (Gln76-Phe77), a thiol analog of glutamine demonstrated inhibitory activities in the millimolar range. A structure-activity relation performed with this compound led the authors to determine the requirement for the correct positioning of the thiol group, the primary amino group, and a carboxamide or sulfonamide group on the side chain. This resulted in the design of a  $\beta$ -amino-(4-sulfamoylphenyl)glycine-thiol, the first significantly efficient inhibitor of tetanus neurotoxin with a  $K_i$  value of 35  $\mu$ M.

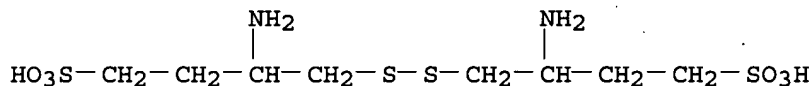
IT 213488-11-0

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

( $\beta$ -amino-thiols inhibit zinc metallopeptidase activity of tetanus toxin light chain)

RN 213488-11-0 HCAPLUS

CN 1-Butanesulfonic acid, 4,4'-dithiobis[3-amino-, disodium salt (9CI) (CA INDEX NAME)



●2 Na

REFERENCE COUNT: 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

## WEST Search History

DATE: Wednesday, February 21, 2007

Hide?	<u>Set</u> <u>Name</u>	<u>Query</u>	<u>Hit</u> <u>Count</u>
		<i>DB=PGPB; PLUR=YES; OP=ADJ</i>	
<input type="checkbox"/>	L4	l3 and \$aminobutane\$.CLM.	2
<input type="checkbox"/>	L3	l1 and l2	37
<input type="checkbox"/>	L2	\$dithiobis\$.CLM.	88
<input type="checkbox"/>	L1	sulfonic acid or sulfonic acid ester or sulfonate or sulfonic acid salt or solvate of sulfonic acid.CLM.	64239

END OF SEARCH HISTORY